ATLONA
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User Manual

DVI with Stereo/Digital Audio to HDMI™ Format Converter
AT-HD610

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USA ★★★★★ SINCE 2003

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INTRODUCTION

Atlona Technologies AT-HD610 DVI Stereo/Digital Audio to HDMI™ Format Converter provides an easy and instant approach for converting digital video (DVI-D) and either digital audio (S/PDIF) or analog stereo audio to digital HDMI™ signal. With this module, DVI based devices such as Computers (Mac/PC) with S/PDIF or analog stereo audio can readily connect to HDMI™ Display. The HD610 is not only a format converter but also an audio embedder, it will embed digital or analog audio into HDMI™ output and sync it with video.

FEATURES

- Silicon Image Chip-Sets allow 99.99% compatibility with all the AV gear (we only use Best)
- HDMI™ and HDCP 2.0 compliant
- DVI video bandwidth up to 165MHz
- Coaxial S/PDIF and Stereo analog audio input supported

PACKAGE CONTENTS

- 1x AT-HD610 unit
- 1x 5V DC locking power supply unit (110/240v universal)
- 1x User's manual

EDID LEARNING

1. Turn on the AT-HD610. Connect the HDMI™ display to **HDMI OUTPUT**.
2. Dial the rotary control **MODE** counterclockwise (↺) from 0 to 7.
3. The green **STATUS** LED will be bright and then dark to indicate the EDID learning is complete.
4. Dial the rotary control **MODE** clockwise (↻) from 7 to 0. DO NOT let the rotary control arrow pass 6, which will erase the just learned EDID and reset to default EDID.

NOTICE

1. Only HDMI™ enabled TV sets with underscan/overscan* support, the full active video can be accurately displayed. Some HDMI™ HDTV sets may not support this feature. If underscan/overscan* is NOT supported, the top, bottom, left and right border of the active video may be screened, and the S/PDIF audio may not sound right.
2. Analog stereo audio can merely support 2-channel audio. This version does NOT support 8-channel analog audio applications.
3. S/PDIF audio input can support 2 out of the 8-channel audio input.
4. S/PDIF only supports 48kHz audio sample rate. Other than this rate, the input digital audio should be adjusted to 48kHz in order to get audio signal correctly sent.

**The underscan mode displays the full video frame, which reveals content on the edge that is recorded. In overscan, the field monitor zooms in to the area that would be visible on most televisions. Set the field monitor to underscan if your video will be viewed on a computer monitor or shown with a projector and also to look for light stands, microphones, and other unwanted objects on the edges of your shot. Set it to overscan to see how the video will look on a television.*

SPECIFICATIONS

Model Name		AT-HD610
Technical		
Role of usage		Converter
HDMI™ compliance		HDMI™
DVI compliance		DVI 1.1
HDCP compliance		Yes
Video bandwidth		Single-link 165MHz (4.95Gbps)
Video support		1080p60, WUXGA 1920x1200@60Hz, UXGA 1600x1200@60Hz
Audio support		Stereo audio (analog and digital)
PCB stack-up		4-layer board (impedance control – differential 100Ω; single 50Ω)
Input TMDS signal		1.2 Volts (peak-to-peak)
Input DDC signal		5 Volts (peak-to-peak, TTL)
ESD protection		[1] Human body – ±19kV (air-gap discharge) & ±12kV (contact discharge) [2] Core chipset – ±8kV
Input		1x DVI + 1x RCA + 1x 3.5mm
Output		1x HDMI™
HDMI™ connector		Type A (19-pin female)
DVI connector		DVI-D (29-pin female digital only)
RCA connector		Coaxial S/PDIF digital audio (PCM 48kHz)
3.5mm connector		Analog stereo audio
Control switch		2-pin DIP switch for mode selection
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	125 x 95 x 25mm (4.9” x 3.7” x 1”)
	Package	175 x 270 x 80mm (6.9” x 10.6” x 3.1”)
Weight	Model	350g (12 oz)
	Package	815g (1.8 lbs)
Fixedness		Wall-mounting housing and latch-locking power jack
Power supply		5V DC
Power consumption		4 Watts (max)
Operation temperature		0~40°C (32~104°F)
Storage temperature		-20~60°C (-4~140°F]
Relative humidity		20~90% RH (no condensation)

PANEL DESCRIPTION

1. Front Panel

1. **S/PDIF IN:** 2-channel digital S/PDIF audio input
2. **STEREO IN:** 2-channel analog audio input
3. **DVI-D INPUT:** Connect to a DVI source with a DVI cable

2. Rear Panel

1. **HDMI OUTPUT:** Connect to a HDMI™ display with a HDMI™ cable
2. **STATUS:** Bright – in operation and connected to a HDMI™ display;
   Blink – in EDID learning process;
   Dim – either not in operation or in operation but connected to a DVI display
3. **MODE:** 0 = analog audio mode; 1 = S/PDIF audio mode; 2-5 = not in use; 6 = use default EDID
   7= learn EDID from connected HDMI™ display
4. **POWER:** Power on/off indicator
5. **+5V DC:** Connect to a 5V DC power supply unit

CONNECTION AND INSTALLATION

1. Connect a DVI source to the DVI input port of the AT-HD610 with a DVI cable.
2. Connect the S/PDIF or stereo audio source to RCA jack or 3.5mm earphone jack respectively.
3. Connect a HDMI™ display to the HDMI™ output port of the AT-HD610 with a HDMI™ cable.
4. Turn on all devices and finish the installation.

SAFETY INFORMATION

Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture

Do not modify the wall plug. Doing so will void the warranty and safety features.

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols.
Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-HD620. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

WARRANTY

Limited Warranty

Atlona Technologies warrants that (a) its products (the AT-HD620) will perform substantially in accordance with the accompanying written materials for a period of 3 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to customers that fall within those areas.

Customer Remedies

Atlona Technologies' and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of the Customer's receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct (i.e. kicking or punching). Any replacement product will be warranted for the remainder of the original warranty period.

No other warranties

To the maximum extent permitted by applicable law, Atlona Technologies and its suppliers disclaim all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product and any related written materials. This Limited Warranty gives customer specific legal rights. Customers may have other rights depending on the jurisdiction.

No liability for damages

To the maximum extent permitted by applicable law, in no event shall Atlona Technologies or its suppliers be liable for any damages arising out of the use of or inability to use this product, even if Atlona Technologies has been advised of the possibility of such damages. Such damages include but are not limited to: special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss. Atlona Technologies' and its suppliers' entire liability under any provision of this agreement shall be limited to the amount actually paid by you for the product. Some Jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damage. The above limitations may not apply to you in such jurisdictional cases.

ATLONA PRODUCT REGISTRATION

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

To register go to: http://www.atlona.com/registration